value of *H*. It is evident that the following expressio n will then be obtained:

from which, according to Eq. (2),

» i

* = 0,- *h* - *h* *2VH- h*

. (3) from which

and

In taking into account this last relationship, Eq. (2) will take the form

^ - A ,

and

The actual quantity of gas *Q* flowing under the inverted weir will be less than the theoretica l volume by reason of the frictional and other resistanc e;

therefore these equations will become:

$$2gH \cdot A \quad (5)$$

$$\ll \quad 2g \quad \frac{-}{A} \quad (6)$$

in which the coefficients p, and « may not be equal, as, in passing from equations (3) and (4) to the actual flow of the gas, it will be found that the relation between H and h is different from that given in these equations.

According to the researches of Bazin, the coefficient M for the flow of water is given by the formula

|^|M=
[0.70+

, (7)

in which *p* is the depth of the channel and *E&* must not be less than |ff . « *E* being the distance *DD* (Fig. 25).